UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/004,120	12/06/2001	Daniel Joseph Wolff	550-292	8027

23117 7590 05/13/2005

NIXON & VANDERHYE, PC
1100 N GLEBE ROAD
8TH FLOOR
ARLINGTON, VA 22201-4714

EXAMINER	
AVELLINO, JOSEPH E	
ART UNIT	**PAPER NUMBER**
2143	

DATE MAILED: 05/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/004,120	WOLFF ET AL.	
	Examiner	Art Unit	
	Joseph E. Avellino	2143	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *27 April 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-45* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-45* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *4/27/05*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-45 are pending in this examination; claims 1, 10, 16, 31, and 40 independent.

Claim Rejections - 35 USC § 101

2. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 31-45 are rejected under 35 U.S.C. 101 because these claims are not tangibly embodied. These claims are recited as "a computer program product" which is not a tangible embodiment of the invention. Applicant is required to amend these claims to tangibly embody these claims on a computer recordable medium. See MPEP 2106.

Double Patenting

3. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington,* 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

4. Claims 1-36 of commonly owned application no. 10/003,265 contains every element of claims 1-45 of the instant application and as such anticipates claims 1-45 of the instant application.

5. "A later patent claim is not patentably distinct from an earlier patent claim if the later claim is obvious over, or **anticipated by**, the earlier claim. In re Longi, 759 F.2d at 896, 225 USPQ at 651 (affirming a holding of obviousness-type double patenting because the claims at issue were obvious over claims in four prior art patents); In re Berg, 140 F.3d at 1437, 46 USPQ2d at 1233 (Fed. Cir. 1998) (affirming a holding of obviousness-type double patenting where a patent application claim to a genus is anticipated by a patent claim to a species within that genus)." ELI LILLY AND COMPANY v BARR LABORATORIES, INC., United States Court of Appeals for the Federal Court, ON PETITION FOR REHEARING EN BANC (DECIDED: May 30, 2001).

Claim Rejections - 35 USC § 103

6. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1-12, 16-27, and 31-42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Asai et al. (USPN 6,760,765) (hereinafter Asai) in view of Hailpern et al. (USPN 6,275,937) (hereinafter Hailpern).

7. Referring to claim 1, Asai discloses a load balancing device (Figure 1, ref. 20) for balancing the load across a plurality of proxy devices (i.e. cache servers, Figure 1, ref. 101, 102, 10n), the computer network having a plurality of client devices (terminals, Figure 1, ref. 41-4n) arranged to issue access requests using a dedicated file access protocol to the file storage device (content server, ref. 30) in order to access files stored on the file storage device, and comprising:

a client interface for receiving an access request issued to the file storage device using the dedicated file access protocol (Figure 1, ref. 21; col. 12, lines 38-48);

load balancing logic for applying a predetermined load balancing routine to determine which proxy device to direct the access request (col. 15, line 66 to col. 16, line 56);

a proxy device interface for sending the access request to the proxy device determined by the load balancing logic, each proxy device being coupled to the file storage device (Figure 1, all; col. 15, line 66 to col. 16, line 66).

Asai does not specifically state that the proxy devices are arranged to perform malware scanning of files stored within a file storage device. In analogous art, Hailpern discloses another load balancing proxy server system which is arranged to perform malware scanning (i.e. virus scanning) of files stored within a file storage device (col. 11, lines 16-60). It would be obvious to a person of ordinary skill in the art at the time the invention was made to combine the teaching of Hailpern with Asai since Asai discloses that the number of streams currently being distributed by the cache server can

be reported to the cluster control unit 21, however other methods can be implemented (col. 24, lines 55-67). This would lead one of ordinary skill in the art to search for other methods of communicating load distribution information to the load balancing unit, eventually finding the system of Hailpern and its novel system of communicating load level information using the PICS protocol (col. 10, lines 40-64).

8. Referring to claim 2, Asai in view of Hailpern disclose the invention substantively as described in claim 1. Asai in view of Hailpern do not specifically disclose the dedicated file access protocol is the SMB protocol and the access requests are SMB calls issued to the file storage device. "Official Notice" is taken that both the concepts and advantages of providing for access requests using the SMB protocol are well known and expected in the art. It would have been obvious to one of ordinary skill in the art to incorporate the teaching of the SMB protocol to the combined system of Asai and Hailpern in order to provide another method to access the file storage system, thereby increasing the availability of the system to other devices using this protocol.

9. Referring to claim 3, Asai in view of Hailpern disclose the invention substantively as described in claim 1. Asai in view of Hailpern do not specifically disclose the dedicated file access protocol is the NFS protocol and the access requests are NFS calls issued to the file storage device. "Official Notice" is taken that both the concepts and advantages of providing for access requests using the NFS protocol are well known and expected in the art. It would have been obvious to one of ordinary skill in the art to

incorporate the teaching of the NFS protocol to the combined system of Asai and Hailpern in order to provide another method to access the file storage system, thereby increasing the availability of the system to other devices using this protocol.

10. Referring to claim 4, Asai in view of Hailpern disclose the invention substantively as described in claim 1. Asai in view of Hailpern do not specifically state that the load balancing is arranged to poll each of the plurality of proxy devices and the access request to be sent to the first responding proxy device. "Official Notice" is taken that both the concept and advantages of providing for first response request handling is well known and expected in the art. It would have been obvious to one of ordinary skill in the art to provide for first response request handling since Asai discloses that other methods of load balancing can be used (col. 24, lines 55-67), which would lead one of ordinary skill in the art to search for other methods of load balancing, eventually learning through common knowledge of the use of first response request handling.

11. Referring to claim 5, Asai in view of Hailpern disclose the invention substantively as described in claim 1. Asai in view of Hailpern do not specifically state that the load balancing is to apply a "round-robin" system of allocation. "Official Notice" is taken that both the concept and advantages of providing for round-robin request handling is well known and expected in the art. It would have been obvious to one of ordinary skill in the art to provide for first response request handling since Asai discloses that other methods of load balancing can be used (col. 24, lines 55-67), which would lead one of

ordinary skill in the art to search for other methods of load balancing, eventually learning through common knowledge of the advantages of round-robin request handling in a distributed allocation system.

12. Referring to claim 6, Asai discloses the proxy device interface is arranged to receive a ready signal from each proxy device in said plurality indicating that proxy device is ready to receive an access request, the load balancing routing being arranged to refer to said ready signals when determining to which proxy device to direct a particular access request (col. 17, lines 10-47).

13. Referring to claim 7, Asai discloses each device is assigned an identifier (i.e. IP address, an inherent feature of any network), and the load balancing device is assigned the same identifier as is assigned to the file storage device (an inherent feature of a server-side proxy farm is that the gateway has the address on the Internet which is used for the content server, thereby ensuring that the load balancer is not bypassed to get to the content server), the client interface being connectable to a communication infrastructure (Figure 1, ref. 51) to enable communication between the load balancing device and said client devices, while the plurality of proxy devices are connectable to the proxy device interface (Figure 1, ref. 52), and the file storage device is connectable to each proxy device (Figure 1, ref. 53), such that the file storage device 30 is only accessible by said client devices 41-4n via said load balancing device 20 and one of said proxy devices 101-10n (col. 12, lines 38-67).

14. Referring to claim 8, Asai in view of Hailpern disclose the invention substantively as described in the claims above. Asai in view of Hailpern do not specifically disclose a plurality of file storage devices and the load balancing device being assigned multiple identifiers corresponding to the identifiers of the storage devices. However it has been held that it would be obvious to replicate features to produce repeated results. See St. Regis Paper Co. v. Bemis Co., 193 USPQ 8 (7th Cir. 1977). Furthermore it is well known that a device may have multiple addresses assigned to itself (i.e. a cache server may cache hits from a plurality of addresses mutually exclusive of any other server on the network). By this rationale it would have been obvious to provide multiple addresses for file storage devices in order to handle services pertaining to those servers.

15. Referring to claim 9, it is inherent to the system of Asai in view of Hailpern that each device is assigned an identifier (i.e. MAC address) unique from all others. Without this, network communications would be impossible since no computer would receive information directed to the computer.

16. Claim 10 is rejected for similar reasons as stated above. Furthermore Hailpern discloses processing logic for causing selected malware scanning algorithms to be executed to determine whether the file identified by the access request is to be considered as malware (col. 10, line 11 to col. 62).

17. Referring to claim 11, Asai discloses the invention substantively as described in claim 10. Asai does not disclose determining which malware scanning algorithms should be selected for a particular file, each proxy device further comprising a scanning engine to execute the malware scanning algorithms by the processing logic. In analgous art, Hailpern discloses another proxy load balancing system which includes determining which malware scanning algorithms (i.e. IBM AntiVirus, processor type 15; or Microsoft Anti-Virus, processor type 5) should be selected for a particular file, each proxy device further comprising a scanning engine (Figure 3, ref. 2040) to execute the malware scanning algorithms by the processing logic (Figure 3; col. 10, line 11, to col. 11, line 65). It would be obvious to a person of ordinary skill in the art at the time the invention was made to combine the teaching of Hailpern with Asai since Asai discloses that the number of streams currently being distributed by the cache server can be reported to the cluster control unit 21, however other methods can be implemented (col. 24, lines 55-67). This would lead one of ordinary skill in the art to search for other methods of communicating load distribution information to the load balancing unit, eventually finding the system of Hailpern and its novel system of communicating load level information using the PICS protocol (col. 10, lines 40-64).

18. Referring to claim 12, Asai in view of Hailpern discloses the invention substantively as described in claim 10. Asai in view of Hailpern further disclose each proxy device further comprises a file cache for storing files previously accessed by the

client devices, upon receipt of an access request identifying a file to be read from the file storage device, the processing logic being arranged to determine whether the file identified by the access request is stored in the file cache and if so return the file to the client device via the load balancing device without communicating with the file store device via the second interface (Asai, Figure 3, ref. S124; col. 16, lines 44-63).

19. Claims 16-27, 31-42 are rejected for similar reasons as stated above.

Claims 13, 28, and 43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Asai in view of Hailpern as applied to the claims above, and further in view of Sathyanarayan et al. (USPN 6,304,904) (hereinafter Sathyanarayan).

20. Referring to claim 13, Asai in view of Hailpern disclose the invention substantively as described in claim 12. Asai in view do not specifically state that the file cache is arranged only to store files which have been determined not to be considered as malware. In analogous art, Sathyanarayan discloses another internet proxy system wherein the file cache is arranged only to store files which have been determined not to be considered as malware (i.e. scan the stream for predetermined content, and delete it if found, and then cache the entry) (col. 5, lines 23-32). It would be obvious to a person of ordinary skill in the art at the time the invention was made to combine the teaching of Sathyanarayan with Asai and Hailpern since Hailpern discloses maintaining statistics regarding the reliabilities of the content sources and other aspects of the invention (col.

6, lines 1-5), however remains silent on what statistics are kept and how they are used. This would lead one of ordinary skill in the art to find other methods of statistical record keeping in a proxy server system, eventually finding the system of Sathyanarayan and its novel invention of collecting statistics from network devices and maintaining log files containing one or more entries associated with each request serviced (e.g. abstract).

21. Claims 28 and 43 are rejected for similar reasons as stated above.

Claims 14, 15, 29, 30, 44, and 45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Asai in view of Hailpern as applied to the claims above, and further in view of Webb et al. (US 2002/00833342) (Hereinafter Webb).

22. Referring to claim 14, Asai in view of Hailpern disclose the invention substantively as described in claim 10. Asai in view of Hailpern do not disclose the system is arranged to determine predetermined attributes, and to send those predetermined attributes to the file storage device to perform a validation check, only allowing those with sufficient rights to view the file. Webb discloses an authenticating network wherein the system is arranged to determine predetermined attributes (i.e. credentials in the form of a secure cookie), and to send those predetermined attributes to the file storage device to perform a validation check (i.e. check out the cookie stored on the client device), only allowing those with sufficient rights to view the file (p. 5, ¶ 48). It would be obvious to a person of ordinary skill in the art at the time the invention was

made to combine the teaching of Webb with Asai and Hailpern to allow a form of security to the system, thereby reducing the likelihood of attacks from malicious users and attempts to hijack the server system.

23. Referring to claim 15, Asai in view of Hailpern disclose the invention substantively as described in claim 10. Asai in view of Hailpern do not disclose comprising a user cache for storing the attributes. Webb discloses an authenticating network which includes a user cache for storing the attributes (i.e. a secure cookie) (p. 5, ¶ 48). It would be obvious to a person of ordinary skill in the art at the time the invention was made to combine the teaching of Webb with Asai and Hailpern to allow a form of security to the system, thereby reducing the likelihood of attacks from malicious users and attempts to hijack the server system.

24. Claims 29, 30, 44, and 45 are rejected for similar reasons as stated above.

Response to Arguments

25. Applicant's arguments filed April 27, 2005 have been fully considered but they are not persuasive.

26. Applicant argues, in substance, that (1) Hailpern does not disclose a load balancing device arranged to intercept an access request issued to the file storage device and to apply a predetermined load balancing routine to determine to which proxy

device to direct that access request, (2) Hailpern does not disclose a proxy server coupled to the file storage device, and (3) the combination of Hailpern and Asai cannot exist since both references are not dealing with the same problem, and as such the Examiner utilized the current invention as a blueprint for piecing together elements in the prior art, implying hindsight was used to combine the references.

27. As to point (1) the Office respectfully disagrees with Applicants reasoning. Applicant states on page 5 that Hailpern lacks applying "a predetermined load balancing routine", and then on page 6 recites that "Hailpern does apply a predetermined load balancing routine in order to determine to which proxy device to direct the access request to". By Applicant's own admission, Hailpern does disclose using a predetermined load balancing routine. Furthermore Hailpern discloses a plurality of proxy servers (see Figure 1, all), which inherently intercept an access request in order to check their cache to determine if the file is stored locally, this is the point of a cache server, otherwise there would be no use for the cache server. By this rationale, the rejection is maintained.

28. As to point (2) the Office respectfully disagrees. Applicant states that the proxy servers are not "coupled to the storage device" since Hailpern's file storage device resides somewhere else over the Internet (page 6). A broad interpretation of the term "coupled" which has been used in analyzing the claim, the term has been defined as "in communication with". Since the proxy devices can retrieve pages over the Internet (as

stated by Applicant's response, page 6) it is determined that the proxy devices are coupled to the file server. By this rationale the rejection is maintained.

29. As to point (3) in response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971). Applicant will notice that both references are considered prior art under 35 USC 102 as well as the motivation for combining the references. The concept of finding different methods of load distribution information is common knowledge to those of ordinary skill in the art in order to reduce bandwidth of managing information while allowing for future upgrades or replacements. By this rationale, the rejection is maintained.

Conclusion

30. Applicant has failed to seasonably challenge the Examiner's assertions of well known subject matter in the previous Office action(s) pursuant to the requirements set forth under MPEP §2144.03. A "seasonable challenge" is an explicit demand for evidence set forth by Applicant in the next response. Accordingly, the claim limitations the Examiner considered as "well known" in the first Office action are now established

as admitted prior art of record for the course of the prosecution. See In re Chevenard, 139 F.2d 71, 60 USPQ 239 (CCPA 1943).

31. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

32. Huang et al. (USPN 6,438,576) discloses collaborative proxy system for distributed deployment of object rendering.

33. Caccavale (US 2002/0129277) discloses using a virus checker in one file server to check for viruses in another file server.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph E. Avellino whose telephone number is (571) 272-3905. The examiner can normally be reached on Monday-Friday 7:00-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David A. Wiley can be reached on (571) 272-3923. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JEA
May 10, 2005

WILLIAM C. VAUGHN, JR.
PRIMARY EXAMINER